What is claimed is:

1. A cardiac assist system, comprising:

a primary device housing;

said primary device housing having a first control circuit, therein, to perform synchronous cardiac assist operations;

a secondary device housing having a second control circuit, therein, to perform asynchronous cardiac assist operations; and

a detection circuit, communicatively coupled to said first and second control circuits, to detect an electromagnetic interference insult upon the cardiac assist system;

said first control circuit terminating synchronous cardiac assist operations and said second control circuit initiating asynchronous cardiac assist operations upon detection of the electromagnetic interference insult by said detection system.

2. The cardiac assist system as claimed in claim 1, wherein said second control circuit places the cardiac assist system in the asynchronous mode for a duration of the electromagnetic interference insult and terminates the asynchronous mode of the cardiac assist system upon detection of an absence of an electromagnetic interference insult by said detection system;

said first control circuit terminating the synchronous mode of the cardiac assist system for the duration of the electromagnetic interference insult and re-initiates the synchronous mode of the cardiac assist system

upon detection of an absence of an electromagnetic interference insult by said detection system.

3. The cardiac assist system as claimed in claim 1, further comprising:

a first shielding formed around said primary device housing to shield said primary device housing and any circuits therein from electromagnetic interference; and

a second shielding formed around said secondary device housing to shield said secondary device housing and any circuits therein from electromagnetic interference.

4. The cardiac assist system as claimed in claim 3, wherein said first shielding is a metallic sheath to shield said primary device housing and any circuits therein from electromagnetic interference.

5. The cardiac assist system as claimed in claim 3, wherein said second shielding is a metallic sheath to shield said secondary device housing and any circuits therein from electromagnetic interference.

6. The cardiac assist system as claimed in claim 3, wherein said first and second shieldings are metallic sheaths to shield said primary and secondary device housings and any circuits therein from electromagnetic interference.

7. The cardiac assist system as claimed in claim 1, wherein said first shielding is a carbon composite sheath to shield said primary device housing and any circuits therein from electromagnetic interference.

8. The cardiac assist system as claimed in claim 5, wherein said second shielding is a carbon composite sheath to shield said secondary device housing and any circuits therein from electromagnetic interference.

9. The cardiac assist system as claimed in claim 6, wherein said first and second shieldings are carbon composite sheaths to shield said primary and secondary device housings and any circuits therein from electromagnetic interference.

10. The cardiac assist system as claimed in claim 166, wherein said first shielding is a polymer composite sheath to shield said primary device housing and any circuits therein from electromagnetic interference.

11. The cardiac assist system as claimed in claim 5, wherein said second shielding is a polymer composite sheath to shield said primary device housing and any circuits therein from electromagnetic interference.

12. The cardiac assist system as claimed in claim 6, wherein said first and second shieldings are polymer composite sheaths to shield said primary and secondary device housings and any circuits therein from electromagnetic interference.

13. The cardiac assist system as claimed in claim 1, wherein said detection circuit is located in said primary device housing.

14. The cardiac assist system as claimed in claim 1, wherein said detection circuit is located in said secondary device housing.

15. The cardiac assist system as claimed in claim 1, wherein said detection circuit is located in a third device housing.

16. The cardiac assist system as claimed in claim 13, wherein said detection circuit is communicatively coupled to said second control circuit through a fiber optic communication system.

17. The cardiac assist system as claimed in claim 16, wherein said fiber optic communication system is coated with a biocompatible material.

18. The cardiac assist system as claimed in claim 13, wherein said detection circuit is communicatively coupled to said second control circuit through electromagnetic interference shielded electrical leads.

19. The cardiac assist system as claimed in claim 18, wherein said electromagnetic interference shielded electrical leads are coated with a biocompatible material.

20. The cardiac assist system as claimed in claim 13, wherein said detection circuit is communicatively coupled to said second control circuit

through electromagnetic interference shielded electrical leads and a fiber optic communication system.

21. The cardiac assist system as claimed in claim 20, wherein said electromagnetic interference shielded electrical leads and said fiber optic communication system are coated with a biocompatible material.

22. The cardiac assist system as claimed in claim 14, wherein said detection circuit is communicatively coupled to said first control circuit through a fiber optic communication system.

23. The cardiac assist system as claimed in claim 22, wherein said fiber optic communication system is coated with a biocompatible material.

24. The cardiac assist system as claimed in claim 14, wherein said detection circuit is communicatively coupled to said first control circuit through electromagnetic interference shielded electrical leads.

25. The cardiac assist system as claimed in claim 24, wherein said electromagnetic interference shielded electrical leads are coated with a biocompatible material.

26. The cardiac assist system as claimed in claim 14, wherein said detection circuit is communicatively coupled to said first control circuit through electromagnetic interference shielded electrical leads and a fiber optic communication system.

27. The cardiac assist system as claimed in claim 26, wherein said electromagnetic interference shielded electrical leads and said fiber optic communication system are coated with a biocompatible material.

28. The cardiac assist system as claimed in claim 15, wherein said detection circuit is communicatively coupled to said first and second control circuits through a fiber optic communication system.

29. The cardiac assist system as claimed in claim 28, wherein said fiber optic communication system is coated with a biocompatible material.

30. The cardiac assist system as claimed in claim 15, wherein said detection circuit is communicatively coupled to said first and second control circuits through electromagnetic interference shielded electrical leads.

31. The cardiac assist system as claimed in claim 30, wherein said electromagnetic interference shielded electrical leads are coated with a biocompatible material.

32. The cardiac assist system as claimed in claim 15, wherein said detection circuit is communicatively coupled to said first and second control circuits through electromagnetic interference shielded electrical leads and a fiber optic communication system.

33. The cardiac assist system as claimed in claim 32, wherein said electromagnetic interference shielded electrical leads and said fiber optic communication system are coated with a biocompatible material.

34. The cardiac assist system as claimed in claim 1, further comprising a lead system to transmit and receive signals between a heart and said primary and secondary device housings.

35. The cardiac assist system as claimed in claim 34, wherein said lead system comprises a fiber optic based communication system.

36. The cardiac assist system as claimed in claim 35, wherein said fiber optic communication system contains at least one channel within a multi-fiber optic bundle.

37. The cardiac assist system as claimed in claim 35, wherein said fiber optic communication system is coated with electromagnetic interference resistant material.

38. The cardiac assist system as claimed in claim 36, wherein said multi-fiber optic bundle is coated with electromagnetic interference resistant material.

39. The cardiac assist system as claimed in claim 34, wherein said lead system comprises a plurality of electrical leads.

40. The cardiac assist system as claimed in claim 39, wherein said plurality of electrical leads have a third shielding therearound, said second shielding preventing said electrical leads from conducting stray electromagnetic interference.

41. The cardiac assist system as claimed in claim 40, wherein said third shielding is a metallic sheath to prevent said electrical leads from conducting stray electromagnetic interference.

42. The cardiac assist system as claimed in claim 40, wherein said third shielding is a carbon composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

43. The cardiac assist system as claimed in claim 40, wherein said third shielding is a polymer composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

44. The cardiac assist system as claimed in claim 39, wherein an electrode located on an end of said electrical lead has an anti-antenna geometrical shape, said anti-antenna geometrical shape preventing said electrode from picking up and conducting stray electromagnetic interference.

45. The cardiac assist system as claimed in claim 44, wherein said plurality of electrical leads have a third shielding therearound, said second shielding preventing said electrical leads from conducting stray electromagnetic interference.

46. The cardiac assist system as claimed in claim 45, wherein said third shielding is a metallic sheath to prevent said electrical leads from conducting stray electromagnetic interference.

47. The cardiac assist system as claimed in claim 45, wherein said third shielding is a carbon composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

48. The cardiac assist system as claimed in claim 45, wherein said third shielding is a polymer composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

49. The cardiac assist system as claimed in claim 39, wherein each electrical lead includes an electrical filter, said electrical filter removing stray electromagnetic interference from a signal being received from said electrical lead.

50. The cardiac assist system as claimed in claim 49, wherein said plurality of electrical leads have a third shielding therearound, said second shielding preventing said electrical leads from conducting stray electromagnetic interference.

51. The cardiac assist system as claimed in claim 50, wherein said third shielding is a metallic sheath to prevent said electrical leads from conducting stray electromagnetic interference.

52. The cardiac assist system as claimed in claim 50, wherein said third shielding is a carbon composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

53. The cardiac assist system as claimed in claim 50, wherein said third shielding is a polymer composite sheath to prevent said electrical leads from conducting stray electromagnetic interference.

54. The cardiac assist system as claimed in claim 35, wherein said fiber optic based communication system is covered with a biocompatible material.

55. The cardiac assist system as claimed in claim 36, wherein said multi-fiber optic bundle is covered with a biocompatible material.

56. The cardiac assist system as claimed in claim 39, wherein said electrical leads are covered with a biocompatible material.

57. The cardiac assist system as claimed in claim 40, wherein said third shielding is covered with a biocompatible material.

58. The cardiac assist system as claimed in claim 44, wherein said electrical leads are covered with a biocompatible material.

59. The cardiac assist system as claimed in claim 45, wherein said third shielding is covered with a biocompatible material.

60. The cardiac assist system as claimed in claim 49, wherein said electrical leads are covered with a biocompatible material.

61. The cardiac assist system as claimed in claim 50, wherein said third shielding is covered with a biocompatible material.

62. The cardiac assist system as claimed in claim 54, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

63. The cardiac assist system as claimed in claim 55, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

64. The cardiac assist system as claimed in claim 56, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

65. The cardiac assist system as claimed in claim 57, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

66. The cardiac assist system as claimed in claim 58, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

67. The cardiac assist system as claimed in claim 59, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

68. The cardiac assist system as claimed in claim 60, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

69. The cardiac assist system as claimed in claim 61, wherein said biocompatible material is a non-permeable diffusion resistant biocompatible material.

70. The cardiac assist system as claimed in claim 39, wherein said electrical leads are unipolar leads.

71. The cardiac assist system as claimed in claim 39, wherein said electrical leads are bipolar leads.

72. The cardiac assist system as claimed in claim 39, wherein said electrical leads are a combination of unipolar and bipolar leads.

73. The cardiac assist system as claimed in claim 34, wherein said leads system is a combination of a fiber optic based communication system and electrical leads.

74. The cardiac assist system as claimed in claim 73, wherein said electrical leads are unipolar leads.

75. The cardiac assist system as claimed in claim 73, wherein said electrical leads are bipolar leads.

76. The cardiac assist system as claimed in claim 73, wherein said electrical leads are a combination of unipolar and bipolar leads.

77. The cardiac assist system as claimed in claim 73, wherein said fiber optic communication system contains at least one channel within a multi-fiber optic bundle.

78. The cardiac assist system as claimed in claim 77, wherein said electrical leads are unipolar leads.

79. The cardiac assist system as claimed in claim 77, wherein said electrical leads are bipolar leads.

80. The cardiac assist system as claimed in claim 77, wherein said electrical leads are a combination of unipolar and bipolar leads.

81. The cardiac assist system as claimed in claim 34, wherein said lead system includes a sensing and stimulation system at an epicardial-lead interface with a desired anatomical cardiac tissue region.

82. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes optical sensing components to detect physiological signals from the desired anatomical cardiac tissue region.

83. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes optical sensing components to detect physiological signals from the desired anatomical cardiac tissue region and electrical sensing components to detect physiological signals from the desired anatomical cardiac tissue region.

84. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes electrical sensing components to detect physiological signals from the desired anatomical cardiac tissue region.

85. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

86. The cardiac assist system as claimed in claim 82, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

87. The cardiac assist system as claimed in claim 83, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

88. The cardiac assist system as claimed in claim 84, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

89. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

90. The cardiac assist system as claimed in claim 82, wherein said sensing and stimulation system includes electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

91. The cardiac assist system as claimed in claim 83, wherein said sensing and stimulation system includes electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

92. The cardiac assist system as claimed in claim 84, wherein said sensing and stimulation system includes electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

93. The cardiac assist system as claimed in claim 81, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region and electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

94. The cardiac assist system as claimed in claim 82, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region and electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

95. The cardiac assist system as claimed in claim 83, wherein said sensing and stimulation system includes optical pulsing components to

deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region and electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

96. The cardiac assist system as claimed in claim 84, wherein said sensing and stimulation system includes optical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region and electrical pulsing components to deliver a stimulus of a predetermined duration and power to the desired anatomical cardiac tissue region.

97. The cardiac assist system as claimed in claim 1, wherein said detection circuit is a thermistor heat detector.

98. The cardiac assist system as claimed in claim 1, wherein said detection circuit is a high frequency interference detector.

99. The cardiac assist system as claimed in claim 1, wherein said detection circuit is a high voltage detector.

100. The cardiac assist system as claimed in claim 1, wherein said detection circuit is an excess current detector.